

UNITED STATES PATENT APPLICATION

OF

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FOR

CABINET COVER OF HOME APPLIANCE

[0001] This application claims the benefit of Korean Application No. 10-2002-0074967 filed on November 29, 2002, which is hereby incorporated by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention relates to a cabinet cover of a home appliance such as a washing machine, and more particularly, to a mechanical coupling between a cabinet cover of a home appliance and an aesthetic member for installing a control panel in an installation hole of the cabinet cover.

Discussion of the Related Art

[0003] Major home appliances such as washing machines, driers, and dishwashers require a means for the user to control the apparatus. Typically, such control is accessible from the exterior of the apparatus, which may necessitate the formation of an installation hole (aperture) in a cabinet cover, where a control panel is provided from the rear side of the cabinet cover. Meanwhile, a home appliance should be aesthetically appealing.

[0004] FIGS. 1-4 illustrate a typical washing machine, i.e., a home appliance, provided with a cabinet cover according to a related art.

[0005] Referring to FIGS. 1-4, a tub 4 and a drum 6 are installed in a cabinet 2 having a front side provided with an opening (entrance) for receiving laundry to be washed. A cabinet cover 10 having an entrance 10h is installed on the front side of the cabinet 2, and a door 22 is installed in the entrance. A motor 8 for rotating the drum 6 is mounted behind the tub 4 and coupled to the drum. A detergent box 24 for storing a detergent therein is detachably installed at one side of the cabinet cover 10, and a control panel 26 is installed in the other side of the cabinet cover. The cabinet cover 10 consists essentially of a cabinet

cover body 12 and an aesthetic member 14.

[0006] The control panel 26 includes a display 26b for displaying an operational state of a washing machine or similar apparatus and a plurality of manual controls 26a for controlling an operation of the apparatus. Meanwhile, the cabinet cover body 12 is provided with an installation hole 12a having a predetermined dimension for receiving the control panel 26. The aesthetic member 14 is provided with a manual control interface means 26a□ (push-button caps) corresponding to the manual controls 26a and a viewing means 26b□ (a window) corresponding to the display 26b. The aesthetic member 14 is attached to the inner side of the perimeter of the installation hole 12a.

[0007] To form the aesthetic member 14, a metal plate (not shown) is first cut according to a predetermined pattern so that the installation hole 12a may receive and be wholly closed by the aesthetic member. In attaching the aesthetic member 14 to the cabinet cover body 12, the aesthetic member is positioned with respect to the installation hole 12a, and spot-welding is carried out at predetermined sites around the front side of the installation hole and around the rear side of the aesthetic member. As a result, a series of welding marks C are created, but since the welding provides insufficient adhesion, an adhesive agent B is also applied to the perimeter of the aesthetic member 14 from the rear side of the cabinet cover body 12.

[0008] The cabinet cover of the related art as described above, however, has an unappealing exterior due to the presence of the welding marks C. In addition, even though the adhesive agent B is used to complete the adhesion, the adhesive strength is weak since the aesthetic member 14 is spot-welded to the cabinet cover body 12 prior to applying the adhesive.

SUMMARY OF THE INVENTION

[0009] Accordingly, the present invention is directed to a cabinet cover of a home appliance that substantially obviates one or more of the problems due to limitations and disadvantages of the related art.

5 [0010] An object of the present invention, which has been devised to solve the foregoing problem, lies in providing a cabinet cover of a home appliance, which enables a secure installation of an aesthetic member in an installation hole of a cabinet cover body having an aesthetically pleasing external appearance.

10 [0011] It is another object of the present invention to provide a cabinet cover of a home appliance, which achieves a mechanical coupling between a cabinet cover of a home appliance and an aesthetic member, without welding marks being visible for the exterior of the apparatus.

15 [0012] It is another object of the present invention to provide a cabinet cover of a home appliance, which achieves an improved mechanical coupling between a cabinet cover of a home appliance and an aesthetic member.

20 [0013] Additional features and advantages of the invention will be set forth in the description which follows, and in part will be apparent to those having ordinary skill in the art upon examination of the following or may be learned from a practice of the invention. The objectives and other advantages of the invention will be realized and attained by the subject matter particularly pointed out in the specification and claims hereof as well as in the appended drawings.

[0014] To achieve these objects and other advantages in accordance with the present invention, as embodied and broadly described herein, there is provided a cabinet cover of a home appliance. The cabinet comprises a cabinet cover body having an installation hole at a

predetermined location for receiving at rear side of the installation hole a control panel for controlling the home appliance; and an aesthetic member, attached at a perimeter of the aesthetic member, to the rear side of the cabinet cover body, for closing the installation hole, wherein the aesthetic member is attached by an adhesive agent and wherein the perimeter of the aesthetic member is welded to the rear side of the cabinet cover body.

[0015] It is to be understood that both the foregoing explanation and the following detailed description of the present invention are exemplary and illustrative and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this application, illustrate embodiment(s) of the invention and together with the description serve to explain the principle of the invention. In the drawings:

[0017] FIG. 1 is a perspective view of a general drum-type washing machine;

[0018] FIG. 2 is a cross-sectional view of the washing machine of FIG. 1;

[0019] FIG. 3 is a cross-sectional view of a portion of a cabinet cover of the washing machine of FIG. 1;

[0020] FIG. 4 is a rear view of the cabinet cover as shown in FIG. 3;

[0021] FIG. 5 is a cross-sectional view of a portion of a cabinet cover of a drum-type washing machine according to the present invention; and

[0022] FIG. 6 is a rear view of the cabinet cover as shown in FIG. 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0023] Reference will now be made in detail to the preferred embodiment of the present invention, examples of which are illustrated in the accompanying drawings. Throughout the drawings, like elements are indicated using the same or similar reference designations where possible.

[0024] Referring to FIGS. 5 and 6, illustrating a cabinet cover of a home appliance according to the present invention, a cabinet cover body 52, having an installation hole 52a, is attached to a side of a cabinet (not shown). The installation hole 52a is provided in a predetermined location of the cabinet cover body 52, to mount a control panel 66 provided with a plurality of controls 66a for controlling an operation of the apparatus and a display 66b to display an operational state thereof. The control panel 66 is fixed to the rear side of an aesthetic member 54.

[0025] The aesthetic member 54 is attached to an inner side of the installation hole 52a, so as to cover the installation hole 52a, using an adhesive agent B applied to an edge of the aesthetic member. The aesthetic member 54 is welded to the inner perimeter of the installation hole 52a from the rear side of the cover body 52. The aesthetic member 54 is formed having a plurality of predetermined holes 54h corresponding to the controls 66a and display 66b, for respectively receiving a manual control interface means 66a and a viewing means 66b. In the cabinet cover 50, the aesthetic member 54 is attached to the inner side of the installation hole 52a of the cabinet cover body 52, and the cabinet cover body 52 is loaded onto a side of the cabinet of a home appliance. Thus, in the cabinet cover body 52, the installation hole 52a is formed to have a predetermined dimension for receiving the control panel 66, and to provide a sufficient adhesion margin, the aesthetic member 54 is larger than that of the installation hole 52a.

[0026] The cabinet cover body 52 and aesthetic member 54 are preferably made of a stainless steel based material to provide an elegant design and are preferably cut to size by a laser cutting device to provide a good finish to their exterior. In preparing the cabinet cover according to the present invention, a stainless steel plate is cut to form the cabinet cover body 52 and the aesthetic member 54, respectively. The installation hole 52a is formed in the cabinet cover body 52, the holes 54h are formed in the aesthetic member 54.

[0027] Subsequently, the adhesive agent B is applied to the front side edge of the aesthetic member 54, covering an area overlapping the perimeter of the installation hole 52a. The front side edge of the aesthetic member 54 is attached to the inner side of the installation hole 52a. Then, the rear side edge of the aesthetic member 54 is spot-welded to the inner side 52a of the installation hole 52a. Thus, the aesthetic member 54 provides the edge on which the adhesive agent is coated with a sufficient width, and its rear side edge is spot-welded to provide plenty of welding points. Hence, the exterior of the apparatus is free from welding marks C, while increasing adhesion strength.

[0028] Finally, the manual control interface means 66a' and viewing means 66b' are loaded in their corresponding holes 54h, and the control panel 66 is fixed to the rear side of the aesthetic member 54.

[0029] Accordingly, in a cabinet cover of a home appliance according to the present invention, after the edge of the aesthetic member has been attached to the inner side of the installation hole of the cabinet cover body, welding is performed on the rear side of the aesthetic member so that there is no external mark of such attachment, thereby enabling an aesthetically pleasing external appearance due to the absence of welding marks visible for the exterior of the apparatus. In addition, an improved mechanical coupling between the cabinet cover and aesthetic member is achieved.

[0030] It will be apparent to those skilled in the art that various modifications and variations can be made in the present invention without departing from the spirit or scope of the invention. Thus, it is intended that the present invention cover such modifications and variations, provided they come within the scope of the appended claims and their equivalents.